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AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

JUNE 1, 1936



Cornus Kousa

**Diseases of Nursery Stock
Cavity Treatment of Shell and Open Types
Some Confused Plants
Seed Practices in the Nursery**

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AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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CONVENTION CALLS.

Inasmuch as the current spring season has been the most active in several years, nurserymen have been tending closely to business. With the arrival of warm weather, and with shipping and planting mostly completed, their thoughts will turn again to the national convention. The preparations in Texas, indicated by a message of welcome on another page of this issue, forecast an enjoyable occasion. The Texas Centennial Exposition will make a visit to Dallas worth while in itself. The entertainment to be provided by the trade in the Lone Star state adds to the incentive for nurserymen to travel thither in July.

In itself, the coming convention of the American Association of Nurserymen will be important, not only as the annual gathering of the industry, but also for action on the proposed reorganization plan. Its object of extending the scope and representation of the national organization is regarded as of prime importance by nurserymen inside and outside the association. The plan has been in process of revision for months, and the outcome is keenly awaited.

Now that the depression is definitely behind us, and the impulse of general business improvement will add to the trade's opportunities, the value of a united and actively represented industry is greater than ever. The matter of trade organization is of moment to every person deriving his livelihood from the production, sale and planting of nurs-

ery stock. There is good reason for everyone's attendance at and participation in the convention at Dallas. Plan to be there!

PREDICT MORE BUILDING.

So numerous and widespread are becoming the predictions of men in the real estate field that another era of home building is beginning that such assertions must be given more attention than as mere optimistic utterances. Besides, the suburban areas of some of our large cities already show many homes in process of erection. The number visible this spring is really surprising after the almost complete stagnation in the building field for several years.

Nurserymen find much satisfaction in this, especially those having good stocks of ornamentals suitable for adorning home grounds. Real estate development has provided the frosting for the nurseryman's cake, or perhaps in these days the better expression would be the butter for his bread. Its absence has meant a tightening of the belt for several years, and the reappearance of activity in the building field is welcome news to the trade.

SPRAY FOR ELM DISEASE.

Spraying with poison gives some protection from Dutch elm disease and may prove a valuable supplemental control measure. Nearly three years ago spraying elm twigs was recommended qualifiedly as a means of poisoning the disease-carrying European elm bark beetles. This was based on earlier experiments at the Bartlett tree research laboratories. The recent announcement by federal investigators of the Dutch elm disease laboratory, Morristown, N. J., to the effect that the European elm bark beetle can be killed by poison on the twigs supports the earlier tentative program. Even now, the official record is a qualified one, and the necessity for keeping the poison upon the twigs throughout the season is emphasized. Such a spray appears to be the most promising means of protecting trees from infection by the Dutch elm disease, since it is well known that the carrier beetles attack vigorous as well as sickly trees, and at present little

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hope can be held out for an elm after it has become infected with the disease. By spraying the smaller branches of elms, some measure of protection may be secured.

CORNUS Kousa.

Differing from the native American flowering dogwood, *Cornus Kousa* blooms in June after the foliage is fully expanded, as will be noted in the front cover illustration. Ernest Wilson reported that its flowering buds are hardier than those of *Cornus florida* and, with the later flowering habit of the *Kousa* dogwood, this would be expected. The plant is native to Japan and Korea and is placed by Rehder in zone V, which limits its use to regions south of Boston and Chicago.

Attaining a maximum height of about twenty feet, the *Kousa* dogwood can be classed either as a large shrub or a small tree. It grows somewhat erect at first, becoming more spreading with age. It tolerates some shade. The twigs are slender and green at first, turning brown, and the foliage turns scarlet in fall. The pink fruits ripen in August and are edible.

Propagation is by seeds, which according to Chadwick should be cleaned and stored dry. They should be stratified in sand and peat or peat alone for 120 days at a temperature of 41 degrees, though temperatures ranging from 32 to 50 will be effective. Seeds should not be collected from lone plants, as these will frequently be ninety per cent sterile, whereas seeds from a group of plants are usually less than ten per cent sterile.

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The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

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JUNE 1, 1936

No. 11

Diseases of Nursery Stock

*Prevention of Disease Conditions and Measures of Control in
the Nursery—By Dr. R. F. Poole, North Carolina State College*

The nurseryman has a moral as well as self-preserving reason for maintaining healthy plant growth. For, if his customers obtain diseased plants, they not only lose the plants purchased, but also in many instances inoculate good soils with organisms that remain forever parasitic on other plants that might be transplanted in the infected area. Then, also, only a few dissatisfied customers can seriously injure the financial structure of the nurseryman. By and large, the nurseryman has already discovered these facts, since he is about the best informed and the most intelligent student of healthy plant growing. He has made special study of the adaptability of plants to such conditions as maintain healthy growth. He has developed the art of transplanting plants so that they will live under a variety of conditions. He has learned how, when and what to use in fertilizing so as to prevent injury and add a supply of such nutrients as are necessary for maintaining healthy growth.

I believe the nurseryman would become an excellent practical plant disease dispenser if it could have been his good fortune to learn something concerning the fundamental causes of plant diseases. In this discussion I want to mention briefly some major disease problems of the nursery and give a few suggestions on control measures.

Physiological Problems.

The nurseryman is confronted with many physiological problems. Low temperatures are important, since many plants which have not established

continuity of top and root system—not gained by some until several seasons of growth following transplanting—often die or become so ragged that they are not satisfactory to the purchaser. Evergreen plants may live, but spot badly as a result of low temperatures. The spotting symptoms may become most prominent months after the injury. Plants grown in areas that present conditions unlike those where the plant grows naturally are most likely to show injury from frost and low temperature. Droughts are injurious, since plants are unable to absorb nutrients in sufficient quantity to maintain a balanced growth and also to prevent such weaknesses as permit attacks by parasitic organisms. Protection from both low temperatures and drought conditions often can be provided at little expense. Shading such plants as box is important to save the root system. Excessive moisture is worse than drought conditions on root systems of nursery stock, since roots are easily drowned. Often waterlogged soils eliminate the oxygen supply so severely that death of root and often of plant follows. Then, even mild injury of the root system prepares an entrance for parasitic fungi and bacteria. You have heard much recently about the minor elements, such as magnesium, iron, zinc, manganese, copper and boron. Some of you have learned the symptoms of disease resulting from deficiencies of these materials in the soil. You may use the salts of these compounds, or you may apply liberal application of barnyard manure to the soil and prevent diseases. Growing and turning under legume cover crops is valuable. This is an important

matter, since only healthy plants are able to maintain the healthy symmetry and form that meet the desires of the purchaser.

Soil Reactions.

The soil is very complex. In fact, the scientist does not understand much about what takes place in the soil. There are many microscopic and other animals and fungi and bacteria that live in the soil. These live on dead plant matter, produce and excrete substances that constantly change the nutritional values in the soil. Some of you probably have seen the toxic effects on plants on lands where large amounts of rye and other vegetation are plowed under just before planting. This is due to the organisms' utilizing the nitrogen and to the toxic substances produced in the organisms and excreted in the soil. It is true that the organisms are necessary, since they decay plant and animal products so that they may be changed into such forms that the plant can absorb them. Sometimes it becomes necessary to sterilize soils to free them of certain parasites. It is safe to do this, since many helpful organisms get back into the soil through the air. However, it is frequently true that the parasite may return to the soil through the same source. Sterilization is best done with steam. However, formaldehyde, mercuric chloride and organic mercury products may be used. You may take advantage sometimes of facts known about the growth of certain parasites in soil types, since the reaction of the soil may be changed to an acid or alkaline condition without injuring the crop. It is important not to change

soil reactions unless you are assured that the plant is adapted to the reaction that will control the organism.

Red spider is perhaps the greatest enemy of the nurseryman. It attacks severely during drought periods, and often its effects may be seen many months afterward. The foliage becomes spotted, and twigs on box, red cedar and arbor-vitæ may die before the end of the season. Sulphur dust is the most effective remedy for this pest. Sometimes one application of fine sulphur dust when the spider appears in late spring or early in the summer will give adequate control. However, it is most economical to make several applications, one in the first dry period of the spring and two during drought periods in the early and late summer. Red spider is not destructive during wet periods and may be washed from the plants in greenhouses and where the water is available.

Crown Gall.

Crown gall is caused by a bacterium, which lives continuously in the soil. All soils are not infected, but it is the type of organism that seems to find its way into every nursery. Peaches, berries, apples, roses and many other plants are attacked by this organism, which produces large galls on the roots and stems. The organism also causes severe damage besides producing the galls, since it invades and damages the tissues. The significance of losses caused by this organism may be seen throughout North Carolina. In certain areas of the sand hills, peach trees in large tracts have died as a result of infections brought from nurseries on the stock. The inspector of nursery stock may be able to detect the diseased plants only when the gall is present, but he cannot be sure that the organism is not present even in the absence of the gall. It may be present in the tissues and in the soil that clings to the roots. Ordinarily if the organism is present it will produce galls on some plants. When it occurs in any soil the logical procedure is to move to another area, since there is no known effective measure for treating the soil for the control of this organism.

The nematode worm also causes galls. They always occur on the root system of plants when the parasitic nematode is present. Precautions should be taken to prevent the occurrence of this pest in the nursery, especially where peaches, cherries or figs

are grown. It apparently does not attack apple, cedar and arbor-vitæ. Since thousands of varieties of plants are attacked by this worm, it is not practical to eradicate it once it infests the soil.

Fungicides.

There are on the market many fine fungicides. Bordeaux mixture will control many organisms producing leaf spot. However, there are some plants, including the peach, that will not tolerate Bordeaux mixture. I prefer to use two pounds of copper sulphate and two pounds of chemical hydrated lime, if stone lime is not available, to make fifty gallons of Bordeaux mixture. The "snow" or finely ground copper sulphate makes the preparation of Bordeaux mixture most convenient. Dilute one of the chemicals and then add the other while stirring rapidly. Apply immediately, since the mixture changes if allowed to stand several hours. The wettable sulphurs mix well with water, so that three pounds of these materials may be added directly to fifty gallons of water and made ready to apply immediately after stirring well. These products stick well and are therefore durable. They are more stable products and more reliable than the old self-boiled lime-sulphur mixtures. The new organic mercury products enable us to control diseases that wilt and rot plant stems, since they are toxic to many parasites and not to the plant in certain concentrations. Thorough application at the right time is a motto for obtaining successful chemical control of organisms that cause diseases.

The problem of developing resistant varieties is one for the nurseryman to consider, since it is a matter of growing plants under certain conditions. A plant grown under one condition may be susceptible to attack of certain organisms and in another it may be resistant even in the presence of organisms that cause disease. Finding and developing new and resistant strains of important varieties is an interesting procedure that should receive the attention of every nurseryman.

CANKERWORMS ACTIVE.

Parts of the northeastern United States are again being overrun and thousands of broad-leaved deciduous trees are being defoliated by cankerworms. For several years these

caterpillars have been extremely numerous and have stripped the leaves from many trees. Fortunately, cankerworms rarely kill trees. Their numbers are checked by natural factors, such as adverse weather, diseases and enemies, before the injury they do proves fatal. Usually after a few years of great abundance the insects suddenly become scarce. This year they are not bad south of Pennsylvania and New Jersey.

Trees valuable enough to merit individual treatment can be protected to a considerable extent from injury and many of the cankerworms can be killed by thoroughly coating the foliage with a lead arsenate spray. This poison spray is prepared by using two to three pounds of powdered arsenate of lead and one-half pint of linseed oil or fish oil in fifty gallons of water. The spray should be kept thoroughly agitated or mixed while it is being applied, so that all of the leaves will be well coated. The best time to spray is when the caterpillars start feeding.

Trees defoliated almost always leaf out again after being stripped, and mild fertilization and occasional soaking of the ground about the roots with water during dry periods will help maintain vigor.

PAY FOR COVER CROPS.

Fruit growers may profit by the new agricultural conservation program. One of the soil-building practices for which payments are available is the growing and plowing under of green manure crops like rye, oats, barley, soy beans, red clover and vetch.

Many orchardists now grow these as cover crops and turn them under.

The program specifies that these green manure crops must be plowed or disked under between March 1, 1936, and November 1, 1936, after the crop has attained at least two months' growth.

Fruit men may profit by mulching their orchards. For an application of at least five tons of mulching material to the acre, a payment of \$5 is allowed if the mulch is put on after March 1 and before November 1, 1936, provided all material produced during this period from interplanted crops is left on the land. County agents can provide particulars.

Cavity Treatment—Shell and Open Types

*Tree Surgery Methods Described by George K. Freeman, California
Tree Consultant and President of Western Shade Tree Conference*

The shell, or hollow type, method, as distinguished from the use of concrete or other solid filling in tree surgery, is one in which various types of materials and processes are utilized to bridge the mouth of the cavity in a tree. The purpose of this operation is to exclude water or moisture from the cavity and to afford a permanent surface over which the cambium may heal.

When this method was first employed, tin or zinc caps bridged the cavity. Two firms in Boston in the early part of the century made use of this form of treatment of cavities. Later developments brought out from 1913 to 1917 in California the type of shell fill which was used extensively for a number of years. This involved the use of a reinforced plastic seal overlaid by a reinforced veneer of a cementary mixture which simulates in color and contour the bark of the tree. This method has several variations. One process involves the use of ventilators, which permit air to circulate in the cavity. Other methods involve the use of a veneer of concrete laid in segments, or divisions, in a manner commonly used in solid concrete fills of the present day.

After the decay is completely excavated from the cavity as in the usual manner, the cavity walls are sterilized and treated with a fungicide and wood preservative; usually a heavy coating of asphaltum emulsion is applied. The edges or walls of the cavity are shouldered somewhat to receive the first layer of galvanized wire mesh. This is nailed smoothly to the cavity walls and carries a heavy coating of plastic cement similar to roofers' cement. The edge is sealed thereby, and the entire surface of this mesh is filled so that a plastic cover, or shield, is developed over the mouth of the cavity. The next stage is to install a second layer of heavier galvanized mesh, or hardware cloth, which carries a veneer of cement and reinforces this layer in a highly satisfactory manner. This layer of cement mixture may be from one and three-quarters to five inches in thickness, depending on the nature of the cavity and the tree. The surface

of this layer is colored to imitate the tree bark. This procedure affords a permanent surface over which the bark may heal and, in conjunction with the plastic seal underlying the concrete outer shell, excludes water and moisture to a remarkable degree. This concrete veneer, if quite thick, as occurs occasionally, may be broken into parts. Usually this is not necessary, as little cracking occurs on account of the reinforcing mesh. This method, which sounds quite complicated, is really very simple. This type of fill may be removed and the interior of the cavity examined and treated again if necessary at little expense.

Many ancient live oaks and sycamores of California, found in advanced stages of decay, were so weakened structurally as to make excavation of diseased wood and filling with solid concrete impossible. To do this would cause complete collapse and ruin of the tree from the weight of the filling, regardless of any elaborate system of bolting or bracing. Owners of trees of this type desired to save them for as long as possible, but did not enjoy viewing them with great gaping holes. Tree surgeons were asked to close up these openings and to exclude water, if possible, so that the appearance might be improved. This was done in many cases without thoroughly excavating the decay, as the cost would have been too high in view of the doubtful life expectancy of such trees. A shell fill was the only solution of the problem where the owner dictated such a policy.

In the shell method, the cavity is cleaned out and sterilized; then the bridge is made. This method permits access to and examination of the cavity. The bridge can be easily removed in a short time when necessary, while in the case of a solid fill as much as one-half ton of concrete might have to be taken out in order to permit examination. After having removed hundreds of solid concrete and shell fills, we know that, regardless of excavating, sterilizing or waterproofing, certain conditions may arise to make examination not only desirable, but necessary. We know that fungicides lose effectiveness, waterproofing ceases

to function, wood preservatives lose strength by leaching and boring insects often act as conductors of fungus spores, causing decay inside cavity work no matter how well it has been done. Therefore, it is well in many cases to have access to cavity interiors in order to learn if the tree is functioning properly.

In many cases, the shell method eliminates heavy bolting, bracing and reinforcing, because of the lightness in weight of the materials used. Installation of comparatively light cable bracing with lag screws in the tops of trees, particularly in the triangulation method where the tree lends itself to this system, removes leverage from the lower crotches and adequately supports the tree.

In many cases known to the writer the weight of solid concrete has caused injury to trees. Particularly is this true where heavy concrete fills have been installed in trunks and large branches off the perpendicular. It is felt, therefore, that there are many cases where shell fills will function better than concrete fills. On the other hand, in smaller cavities and in trees that may be properly braced, the solid type may be preferable.

The shell fill, of course, has its disadvantages. Leaving a tree hollow when a thin shell exists may cause serious checking and cracking of the cavity walls as the sapwood dries out. Fungus spores will find their way in unless care is taken to prevent this. Then condensation of damp air results in moisture on the interior walls, but this is probably no more than in solid concrete fills. Boring insects may work more freely through a thin-walled old tree where a shell fill is used.

Open Cavity.

The open system, as the name implies, calls for no filling or bridging of any nature. The cavity is excavated as usual, and drainage is provided by sloping the floor, or bottom, of the cavity.

If the entire tree is hollow, a ground connection may already exist so that no water can stand in the cavity. After the tree is cleaned out thoroughly, a disinfectant is applied and

covered by a heavy waterproof dressing.

This type of work is cheapest of all. It provides amply for frequent and easy inspection. It draws no water, as a cement fill might. However, insects and fungus spores can easily get to the cavity walls if the least break occurs, and large open cavities are not good to look upon.

We know so little of the biology and physics of tree wounds that it may be well to use a method that lends itself to frequent scientific inspection and observation over a period of years. Should wounds be covered with a waterproof dressing? Living tissues are not treated that way when wounds occur in the human body. Can decay start under a waterproof film independent of outside inoculation? Our plant pathologists and other scientists of the government bureaus and the universities will be the means of solving these problems, not the tree surgeon.

No particular type of hollow fill is adequate in all cases, but the method that seems best, be it solid, shell or open system, should be utilized to meet the particular need of any individual tree.

After many years of experience with shell fills, with open cavity work and with treatments utilizing solid concrete, cork, asphaltum, sawdust and many other materials, the writer is of the opinion that the ideal methods and materials are yet to be discovered. The writer believes, further, that too much emphasis has been placed upon cavity work and types of fillings, rather than upon proper diagnosis of cultural conditions and upon insect control.

LARCH CASE-BEARER.

When leaves of the larch turn yellow or brown in early spring, the injury is caused by the feeding of the larch case-bearer, a brown, black-headed caterpillar about one-quarter inch long, first biting a hole and then mining in the leaf. The caterpillar is inclosed in a small, grayish case. The young larvæ at first mine in the larch leaf; later this is cut off and serves as a case for the larvæ. The winter is passed in the larval stage inside the case. Early spring spraying with arsenate of lead, two pounds to fifty gallons of water, when the young are feeding, is an excellent method of control.

FEEDING STRAWBERRIES.

The strawberry industry of the eastern section of the United States is varied and interesting, but in too many instances is conducted on too slipshod a basis, said Clayton A. Bunting, of Buntings' Nurseries, Inc., Selbyville, Del., writing recently in the Rural New Yorker. On the Del-Mar-Va peninsula strawberries have declined as a crop as a result of the wearing out of strains rather than for lack of good productive varieties. Such varieties as Blakemore will be in the limelight for years, and certainly Big Joe, Lupton Late, Gandy, Chesapeake, Premier and Missionary are all good varieties if properly grown, he declared. But it remained for the United States Department of Agriculture to present to the growers of the country Dorsett and Fairfax, two of the finest types of strawberries. Both varieties are highly productive and their fruiting season extends over a good three weeks or longer. It is necessary to pick fruit from the plants about ten times during the season, which just about doubles most varieties in this respect.

Prior to the introduction of these two varieties, it was necessary to grow varieties highly acid in their content to assure shipping quality. Of course, this resulted in a sacrifice of flavor to distant markets in favor of shipping quality. The fact that both varieties have low acid content, yet ship well, will no doubt result in an expansion of distant markets to the ultimate benefit of all growers.

There is much to be said for and against various methods of growing strawberries as a market crop. Intensive cultivation of a piece of land prior to its receiving a planting of strawberries is a necessity if the grower is to realize the needed weed-free strawberry field of the following year. It is impossible to grow a bumper crop of berries amid a bumper crop of weeds, for not only will they interfere with production of the plants, but with their ability to ripen the fruit as well. Almost any type of well drained soil can be made almost weed and grass-free over a period of three years of intensive cultivation of any other crop.

Now comes the vital point of plant feeding. During the war years, due to a scarcity of potash, this element became a forgotten product for the growing of farm crops; in fact, many

growers of strawberries located in poultry-raising sections have gone so far as to use exclusively the almost free chicken manure that can be obtained for the hauling. This manure contains, of course, much nitrogen in ammonia form and completely lacks potash, a vital necessity to successful strawberry culture. An application of potash at the rate of ten pounds to every 100 yards of row should be made in September. Apply this along the side of the row, being careful not to let any hit the plants, particularly if they are damp. This should be cultivated in immediately. Applied in autumn, it has plenty of time to get into action. This will result in a heavier root system and stronger fruiting buds.

The proper procedure of the so-called top-dressing of strawberry plants is to apply a fertilizer analyzing four per cent ammonia, eight per cent phosphoric acid and ten per cent potash and, instead of being broadcast in the strawberry rows in April, this application should be made not later than the early part of March and preferably in January or February, which gives the potash ample time to act. Potash disseminates slowly and when applied in April has little value to a crop which ripens in May and early June. With the balanced plant food containing the much-needed potash, one obtains, instead of a rank, heavy foliage, a more moderate leafage, which will admit both light and air, so necessary to the good development of fruit. Not to be discounted is the more sturdy root system that will develop from the addition of potash, a root system that will carry the plant over periods of weather stress in good order.

Mulching with wheat straw, salt hay or even pine needles, which are plentiful in most sections, will be found profitable and is of vital importance. It will keep the soil cool, which is most desirable with a plant as shallow-rooting as strawberries, and will prevent splashing of sand or other soil on the fruit from hard showers, resulting in clean, attractive fruit, which commands much better prices.

The third in the series of articles on "Pruning Ornamental Trees and Shrubs" by L. C. Chadwick will appear in the June 15 issue.

Some Confused Plants

**Faulty Nomenclature Employed by Botanists and Catalogue-Makers
Misleading in Several Important Groups of Perennials—By C. W. Wood**

There is not a little confusion in our naming of the bellflowers, but there is perhaps no other in as bad a state as the plant we usually see listed as *Campanula pusilla*. A general description of the species may be worded as follows: Plant, perennial, with shining, ovate, short-petioled root leaves that form tufts; flowers, nodding, varying in shades of blue, on stems three to six inches high, calyx lobes linear, erect, a third shorter than the bell-shaped corolla, style not exerted. As seen in gardens, the plant varies much in size and color of flower, and this is evidently true also in its natural state. It is not to be wondered at, either, that a plant of such wide distribution in the Alps, including that of altitude, should show variation. Botanists have not made matters easier, for they have given many of the varieties specific names, including *pumila*, *pusilla*, *Vensloii*, *tyroliensis*, *cæspitosa*, *modesta*, *Bellardii*, *Mirandii* and *cochlearifolia*. The last-named is, I believe, the name now accepted by most students of the genus and is perhaps the one we should adopt.

The foregoing does not mean, however, that we should drop from our lists the material which we are giving such specific names as *Bellardii*, etc., but it does point to the fact that we are making species out of material that deserves no more than varietal rank. And much of the material differs so little from the type that it would probably be in the interest of simplicity to let it remain *C. cochlearifolia*. Just a word about the plant now being offered as true *C. cæspitosa*. So far as I can see, it differs not at all from *C. cochlearifolia*, except that the mouth of the corolla is slightly constricted and it may be a little less stoloniferous. So far as garden uses are concerned, it is scarcely likely to justify adding another variation to the present long list.

Sedum Stoloniferum.

After all that has been printed in professional and amateur publications regarding the use of the name *stoloniferum* as applied to a creeping sedum that is to be found in most nurseries and many gardens, the name persists. As a matter of fact, the plant really is

Sedum spurium, a fairly close ally, but one that can be easily separated from the other at almost any period of growth. The matter is further complicated by some catalogue-makers' using the name *stolonifera*, for which there is no authority anywhere in the literature on the genus.

Sedum stoloniferum is rarely seen in this country, not one plant in a hundred under that label being the true thing. It comes from southwestern Asia, and none of the material I have had is permanently hardy in my garden in latitude 45 degrees north. It is probably not necessary to point out all of the minor characters that differentiate the two plants, rather depending upon one character to mark the distinction. If you have material about which you are not sure, it may be identified as follows: If the flowers are wide open and are borne in a lax, leafy inflorescence of three wide-spreading branches, which are often forked, with flowers in the forks, you have *S. stoloniferum*; if the flowers are large and have semierect (not flat and wide open as in the foregoing) petals and the inflorescence is a dense cluster, it is *S. spurium*.

Sedum Forsterianum.

This entire issue could be filled with the results of our faulty sedum nomenclature, but space will be taken for just one more. This, *S. Forsterianum*, is, judging from the material passing under that name, little understood. In the first place, there is no plant entitled to the specific name of *Forsterianum*, according to the best authorities on sedums. In the second place, if we use the name, it should be applied to a small, slender, green form of *S. rupestre*, with a round-topped inflorescence. As a matter of fact, though, the material we usually see under this label is a large, vigorous, somewhat glaucous *rupestre*. *Sedum rupestre* is so highly variable that it would be an endless nightmare to try to name all its forms now in gardens, and even to admit the material usually sold as *Forsterianum* only adds complications to an already mixed-up story. Unless we have material approximating Smith's (the describer of the plant)

description, we have no reason for using the name. And even then it would be best made a variety of *S. rupestre*. Præger's comment on the problem of differentiating *rupestre* forms by reason of the shape of the barren shoot, the character on which many varieties have found their way into the literature, reads: "For ordinary purposes variety *Forsterianum* (the small, slender, green form) and variety *minus* (glaucous like the type, but much smaller in all its parts) alone seem worth distinguishing."

Saxifraga Densa.

Before the plant, an incrusting saxifrage, which is being sold as *Saxifraga densa* becomes thoroughly established in our nurseries and gardens under that name, attention should be called to the fact that it is traveling under an assumed name. That it is not *S. densa*, as understood by botanists, is as plain as can be, for that name is correctly applied to a form of *S. moschata*, which in turn is a mossy plant, while the one under consideration is an incrusting species on the order of some forms of *S. aizoon*. I have no idea what it should be called, but do know that it should not be *S. densa*. That it is even now quite well distributed is shown by the fact that it has come to me from four different sources, all under the same name.

Veronica.

According to the Standard Cyclopedia of Horticulture, practically all material we are listing as *Veronica prostrata*, *V. rupestris*, *V. dubia*, *V. dentata*, *V. nitida*, *V. latifolia* and perhaps others is referable to *V. Teucrium*. It is rather late in our journey to ask us to revise our speech of so many years' standing, but it is encouraging to note that a number of our better catalogue-makers are setting the pace.

In passing, it may be well to note that our best authorities deny us the use of the name *V. saxatilis*, telling us that the 5 or 6-inch shrubby plant with small, oblong leaves and pale pink or blue flowers in a lax raceme should be called *V. fruticulosa*. Another mistake that some of us have been making

is in the use of *V. amethystina*, the bastard speedwell, which they tell us is correctly *V. spuria*. It is pleasing to note, too, that the erroneous name *V. maritima* has almost entirely disappeared from commercial literature, the correct name, *V. longifolia*, having superseded it.

Æthionema Coridifolium.

Like most of our mix-ups in nomenclature, the use of the name *Iberis jucunda* for *Æthionema coridifolium* is based on a mistake of a botanist. In this case Schott and Kotschy published the plant as *Iberis jucunda*, while further study by another botanist, De Candolle, put it in *æthionema*, where we usually find it today. That is not the case at all times, though, for we still find it occasionally listed as an *iberis*.

Petrocallis Pyrenaica.

The advent of rock gardening on the modern scene has brought to the fore many plants that were hitherto unknown to gardeners, bringing also the confusion which botanists had found in their naming. A case in point is the little draba-like plant which Linnaeus, the father of botany, named *Draba pyrenaica*, but which R. Brown later set over into a monotypic genus, making it *Petrocallis pyrenaica*. It differs so little from *draba* that it could, for all garden purposes, remain there, but in the interest of accuracy and uniformity we must call it *petrocallis*.

Achillea, Anthemis and Cladanthus.

Probably the most fertile field for confusion between the two genera *achillea* and *anthemis* is in the plant we usually know as *Anthemis Aizoon*. It is a white, woolly plant with white flowers in June and July, often seen in rock gardens at present under the name just mentioned. Botanists tell us, however, that it should be *Achillea ageratifolia*. Another composite that we formerly grew as *Anthemis arabica* is now coming back into favor and because of its long blooming season will probably get much attention from gardeners. Being an annual, it has little place on a page devoted to perennials, but it is mentioned in this connection because the authorities say it should be *Cladanthus arabicus*, instead of *anthemis*.

Statice, Armeria and Limonium.

The story of *armeria*, *limonium* and *statice* is too long to be retold here,

though it is thought that attention should be directed to it while we are on the subject of confused nomenclature. The confusion here is probably without parallel in the whole range of systematic botany, and even botanists are not of one opinion regarding the matter. So long as we have to have some one authority to look to and as most of us in America take the Standard Cyclopedia of Horticulture as our guide, a study of the entries therein under the heading of *statice* will make the matter clear. According to that guide, the plants that we have been calling *armeria* should be *statice* and the ones we know as *statice* should be *limonium*, leaving *armeria* without standing. Catalogue-makers who are really interested in correct naming will do well to study the reference mentioned.

ARTHUR N. CHAMPION.

President of the Ohio State Nurserymen's Association, Arthur N. Champion operates the Champion Nurseries, Perry, O., one of the leading nurseries in the famous Lake county region. This is also one of the oldest firms in the area, and it has progressed steadily from the year of its founding, 1891, by H. J. Champion, who grew up from boyhood in the section. Fruit trees and small fruit plants were first produced, emphasis being placed early on developing good-quality stock. In the forty-five years



A. N. Champion.

AMERICAN NURSERYMAN

that the firm has been in business, it has gained an enviable reputation in this respect. Associated with Mr. Champion are his three sons and D. E. Cone. About 200 acres are operated.

Arthur Champion was graduated from the Perry high school in 1902 and immediately started in at the bottom of the business under the splendid tutelage of his father. After the death of the latter, in 1921, the son planned some marked improvements and in 1922 built the nursery's first storage cellar. Another cellar was built in 1926 and a third in 1927. All of these cellars were constructed according to the most modern methods, with double cement blocks for the sides and a roof with three air passages.

The Champion Nurseries are at present growing practically the same stock they did at the beginning, with the exception that they are specializing in ornamentals, featuring hardy shrubs, roses, shade trees, evergreens and grapevines, in addition to a general line of nursery stock. The nursery does all of its own shrub propagating and has been highly successful in this activity, keeping up with the latest cultural practices. Up-to-date tools and supplies, augmented by tractors, trucks and teams, make up the equipment. Considered one of the cleanest nurseries in the state, the Champion establishment is also noted for its extensive use of green manure and cover crops to maintain soil fertility.

Close personal contact with the trade is maintained by Mr. Champion, which is undoubtedly the basis for the reputation he enjoys of always having the right plants to sell at the right time.

RHODODENDRON LACE BUG.

The lace bug does considerable damage to rhododendrons and mountain laurels, producing unsightly yellowish or brown spotting of the leaves, particularly on those in the full sun. It is a flat bug with light, lacy-like wings. The insect overwinters in the egg stage along the midrib on the underside of a leaf. These eggs hatch in the early part of May. There is also a second brood in August. Spraying with miscible oil, 1 to 70, as soon as they hatch, will control the early brood. The undersurface of the foliage should be sprayed thoroughly, using oil at the rate of 1 to 60, for the August brood does the most damage.

Seed Practices in Nursery

Methods Derived from Personal Experiences in Propagation by Seeds in Long-Established Ohio Nursery—By Edward M. Jenkins

Our firm has been growing trees and shrubs from seeds for more years than I can remember, but has seemingly made but slow progress in developing ways of handling seeds to get better germination, in spite of continuous practical experiments. Some of the hints given in Laurie and Chadwick's book, "The Modern Nursery," and in Dr. Chadwick's articles in this magazine now published in pamphlet form, have in many cases been decidedly helpful and have resulted in increased germination and better stands. Some of the personal experiences we have had with seeds follow:

ABIES—We have had indifferent results from stratification. We only tried stratifying *Abies concolor* once, and that time all the seeds rotted and we did not plant them. However, *Abies balsamea*, *Fraseri*, *pectinata* and *Veitchii* treated exactly the same came through in good shape, and we got a good stand of them. We have sometimes had equally good stands without stratification. *Abies Nordmanniana* did not do so well, but there is always a doubt with us about this variety, whether the seeds are good or not. Occasionally we get a good stand, but we often get only two or three seeds to germinate from a pound of seeds treated exactly the same way another year. *A. concolor* and *A. Nordmanniana* are both quite large, soft seeds, with apparently thin seed coats, and we think if they can be purchased as fresh as possible and stored in practically air-tight containers, it is as good as any way to keep them until planting time in the spring. The difficulty in stratifying them seems to be to keep the water content of the sand just right, as too much moisture will cause them to rot and too little will cause them to dry out, and one is about as bad as the other.

ACER—We find different varieties require different treatment. *Acer platanoides* and *Acer saccharum* grow with little difficulty if collected and planted at once, or they will often keep over to the second year stored dry and grow quite satisfactorily with little care. However, the varieties ripening in spring and early summer

do not grow well if allowed to dry and should always be planted as fresh as possible.

ÆSCULUS—We grow *glabra*, *Hippocastanum* and *Pavia*, planting the seeds as soon as collected in the fall directly in rows in the field, with practically 100 per cent germination.

ALBIZZIA—We have planted *A. Julibrissin* only once in the spring, broadcast in a bed with no treatment. We got an excellent stand, which, of course, all died the following winter, and the following spring we got another fairly good stand in the same bed.

AMELANCHIER—We plant the fresh berries as soon as collected. They usually germinate the following spring.

AMORPHA FRUTICOSA—Grows too easily to be mentioned. Fall-sown seeds germinate the following spring. But try to sell them!

AMPELOPSIS—We have not had the success with *Ampelopsis Veitchii* that we think we should have. Last year we soaked the seeds in warm water for twelve hours and had about the same results as the year before with no treatment.

ARISTOLOCHIA—Gives us better results when sown fresh in the fall and mulched.

ARONIA—We usually soak the berries for several days, then mash and stratify until spring. We should prefer to separate the seeds from the pulp if we knew of some cheap practical way to do it.

BENZOIN—We have not been able to get seeds that have not been badly dried out and we have not had good germination.

BERBERIS—We usually soak, mash and skim off the skins and pulp. Then stratify and plant early in the spring. We occasionally plant the berries just as they come, with almost as good results.

BETULA—In planting home-collected seeds we have had better results from fall planting than from stratification.

CALLICARPA—Plant either fresh seeds in the fall or stratify and plant in the spring. We have had good results both ways.

CALYCANTHUS—Can be kept dry until spring. Then we have better results by soaking for ten or twelve hours in lukewarm water. This gives quicker and more even germination.

CARAGANA—We treat about the same as *calycanthus*.

CELASTRUS—We have had good germination from spring planting with no treatment.

CEPHALOTAXUS—Peculiar action. We have usually stratified this. The seeds lie in the ground for a year. When they come up the seeds seem to be too heavy for the plant to lift. We have had them rot off without being able to lift their heads. We had a good stand last year, but hand-picked the plants loose from the seeds.

CERCIDIPHYLLUM—Has been rather slow germinating for us. Comes up the first year, but so late that plants are too small and tender to stand our winter weather. Plant early as possible after ground is warm.

CERCIS—Benefited by soaking for several hours in hot water.

CHAMÆCYPARIS—Requires no special treatment. Keep dry until spring and broadcast in beds.

CHIONANTHUS—Stratify in cool place for a year or eighteen months. Makes little growth the first and second year. Roots are straight. They need a heavy mulch to prevent heaving.

CLADRASTIS—Soak in almost boiling water.

CLERODENDRON and **COLUTEA**—Seem to require no special treatment.

CORNUS—Seems immaterial whether or not pulp is washed off. We prefer to plant seeds fresh from the trees without drying.

COTONEASTER—Usually a 2-year proposition, occasionally germinating the first year. We try to remove the pulp. It is better to dry the seeds and rub with a brick on a hard surface, then run over a sieve. Difficult to soak and wash through a sieve wet. Skin rots slowly. Stratify and plant in spring. Will come up in one year.

CRATÆGUS — Macerate and plant pulp and all. Lies over a year.

CRYPTOMERIA — Presents no problem. Keep dry and plant in spring.

CYDONIA — We have found no better way than to cut around the fruit and dig out the seeds with a knife blade.

DAVIDIA — Results not good enough to make recommendations. We got twelve sprouts from twenty seeds; all died the first winter. As many as four sprouts come from one seed or fruit, which is hard. Cut off the pulp and part of the nut with a sharp knife. Stratify and wait a year after planting and sometimes two years.

ELÆAGNUS — Soak in warm water. Plant in early spring.

EVONYMUS — Variable results.

FAGUS — Keep from drying. Collect and plant at once. Where this is not possible, stratify and keep in cool place. Plant as early as possible in spring. We have kept *Fagus sylvatica* in the coolest part of our cellar and, being unable to get it planted early, have had it all sprout and rot.

FRAXINUS — Collect and plant immediately.

GINKGO — Soak and wash off pulp. Stratify and plant in spring.

GLEDITSIA — Soak in almost boiling water just before planting in spring.

GYMNOCLADUS — Soak in boiling water twelve hours. Drain off and add boiling water again for twelve hours. Plant in spring.

HALESIA — We have usually stratified and planted in the spring. The seeds lie over a year before germinating.

HAMAMELIS — Unless soaked in hot water, they will lie over a year without germinating. If you collect the seeds yourself, gather the pods while the bushes are in bloom, place in paper flour bags and hang in a warm place.

ILEX — We often plant, but usually with poor results. We have had fairly good stands of *Ilex glabra* by stratifying and planting in late spring or early summer. *Ilex verticillata* has not given quite so good results, even with seeds freshly collected and immediately planted.

JUGLANS — Collect and plant at once in rows in field. Will make better plants than when planted in beds.

KELREUTERIA — Helped by soaking in hot water, but germinates

unevenly. Keep coming up for two or three years.

LABURNUM — We broadcast the seeds in beds in early spring. We sometimes stratify them, but they usually germinate quite well either way.

LARIX — Seeds are never more than forty or fifty per cent viable. Broadcast in beds. No special treatment.

LIBOCEDRUS — No special treatment.

LIGUSTRUM — No special treatment. Fall planting.

LIQUIDAMBAR — Usually store dry for spring planting.

LIRIODENDRON — Always a low percentage of viable seeds. The squirrel cut pods usually are the best. Dry the pods and pick apart by hand. Plant early as possible in fall. If not possible in fall, then stratify and plant in spring. We usually plant them in a wide, shallow trench, covering about one-half inch deep, then mulch with sawdust if available.

MAGNOLIA — Presents a problem. Removing the oily seed coat is important. Keep seeds damp in a warm place, rub between the hands, wash pulp through a sieve. It will gum up a sieve. Plant at once or stratify until early spring. Sow in beds.

MAHONIA — Important to get fresh seeds. We prefer berries that have not been dried, if possible. Wash off pulp and plant immediately, or stratify until spring.

NYSSA — Germinate better if pulp is removed. Plant in fall.

OXYDENDRON — Very fine seeds. Germinate and grow slowly. Acid soil. Hardly worth while growing it from seeds.

PICEA — Keep dry in air-tight containers. Plant in spring. We used to soak these and think it was necessary, but in later years have had just as good results without.

PIERIS — Difficult. Plant in flats in greenhouse. Acid soil. Not very successful.

PINUS — Not necessary to stratify many kinds, but it is important with large-seeded varieties, such as *Pinus Cembra* and *flexilis*.

PSEUDOTSUGA — It is important to get seeds from high altitudes in Rockies.

PYRACANTHA — If possible, procure fresh fruit. Macerate, mix with dry sand and plant immediately.

QUERCUS — Most oaks should be planted as soon as possible after the

acorns fall, as many varieties, such as the white oak, will sprout within two or three days where they fall.

RHODOTYPOS — Store dry. Soak and plant in spring.

RHUS — Plant in fall. No treatment.

SCIADOPITYS — Have given it no special treatment. We expect to soak it in warm water next spring. Heretofore seeds planted in May and June have not germinated until early September and last year in October. The little seedlings, having only their first leaves, are a problem to carry through the first winter, and even the second year are only an inch to an inch and one-half high.

TAXUS — Stratify. Plant in spring. Will lie over a year.

THUJA — With exception of *orientalis*, requires no special treatment. Store dry and plant in spring. *Thuja orientalis* sometimes comes quite well without any special treatment, especially if home-collected seeds are planted, but if dried seeds from some distant point are used, it is often beneficial to soak the seeds for twenty-four hours in quite warm water, changing it once.

TILIA — Almost always a 2-year seed. We have heard of seeds from some specimen trees always germinating the first year, but we have never found one of these trees ourselves.

TORREYA — Have planted late dry stored seeds with no results, and we are convinced the seeds should be secured as early as possible and stratified until early spring.

ULMUS — Early-ripening varieties should be planted at once. They do not retain their viability long.

VIBURNUM — Better to stratify and plant in spring. Especially do not plant *Viburnum Opulus* in fall. Will often germinate during a day or two of warm weather in February and then will be killed during the succeeding cold weather.

WISTARIA — Can be stored dry and planted in spring with no treatment. Two or three hours' soaking in lukewarm water immediately prior to sowing will hasten germination.

In regard to many of the seeds mentioned, the Boyce Thompson Institute has worked out the correct storing method and time periods, with proper temperatures to be maintained to secure the best results. However, with the limited facilities available in a small nursery such as ours, we find

it impractical to follow the recommendations to the letter. But even adhering to them as nearly as possible often helps a great deal.

ERADICATES POISON IVY.

The perennial queries about poison ivy recur as good outdoor weather returns.

For the eradication of this plant, a solution of calcium chlorate is the most satisfactory. This is prepared by dissolving one-half pound in a gallon of water, and the solution sprayed on the plants when in full leaf. If the spraying is done on a warm, sunny day, the results are better. It is not necessary to saturate the soil around the roots, as the plants absorb enough through the leaves and stems to do the killing. One thorough application is usually effective. However, it may be necessary to make a second application late in the season, especially if the poison ivy is growing in stone walls or stone piles.

One should be particularly careful not to get the solution on any plant other than the one to be killed, as it will kill any vegetation with which it comes into contact. There is no residual effect on the soil, and grass or other crops may be grown on spots treated with calcium chlorate after a few good rains. This chlorate solution is not particularly poisonous to animals, and no special care need be taken to keep animals away from plants. The material does not kill large trees and shrubs unless sprayed directly on them.

MIDWEST REFORESTATION.

Reforestation of large denuded woodland areas has begun on a gigantic scale this spring, when resettlement administration workers started planting 5,000,000 trees on projects in five midwestern states.

L. E. Sawyer, chief of land utilization activities in Illinois, Iowa, Missouri, Ohio and Indiana, estimated several large projects would be completed this season. The purposes of this tree planting are future lumber production, erosion control and game preservation.

In Indiana, for example, thousands of hardwoods and other varieties for lumber are being planted on the Bean Blossom and Martin county projects. Similar varieties are going into the

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ground on the Ross-Hocking and Zaleski forest projects in Ohio.

On the other hand, 500,000 black locust seedlings constitute the only variety being set out on the southern Iowa pasture demonstration project. The purpose here is almost wholly one of reducing erosion damage and rebuilding the soil through nitrogen fixation.

On the University of Missouri game preserve and arboretum most of the plantings will be of varieties intended to furnish food and cover for wild life. Such varieties include black locust, red cedar, wild plum, wild cherry, mulberry, dogwood, redbud, bittersweet and shortleaf pine. There will be 22,150 trees planted.

Most of the 825,000 trees planted on the Dixon Springs pasture and erosion-control project in southern Illinois and the 374,000 on the southeastern Ohio erosion-control project will be black locust.

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Decision in Patent Suit

Ruling for Defendant in First Suit Brought under Plant Patent Act Holds Infringement Not Proved

A decision in favor of the defendant, Youdath Perennial Gardens, Inc., Mentor, O., was rendered May 13 in the first lawsuit ever brought under the plant patent act. The complainant, the Cole Nursery Co., Painesville, O., had charged infringement of plant patent No. 110, covering a variety of barberry named by the introducers Truehedge Columnberry. Judge Jones, sitting in the United States District court for the northern district of Ohio, held that the Cole Nursery Co. had not proved its claim of infringement of said patent.

A move to reopen the case to present new evidence is planned by the Cole Nursery Co., and it is likely that the case will be carried to higher courts.

The plant in question is a barberry of upright and pyramidal shape, patented by Michael Horvath, Mentor, who claimed discovery of the plant and assigned his patent right to the Cole Nursery Co. The shrub proved popular and was sold in great numbers.

According to the bill of complaint, filed last fall, the defendants were alleged to have reproduced and sold plants of the barberry in violation of the plant patent. An injunction was asked, restraining the defendants from reproducing or vending plants embodying the discovery, and an accounting of damages was also requested.

Filing an answer, the defendants denied the validity of the patent, claiming there had been prior publication and public use of the plant and that the description of the plant had been limited. A court trial ensued, with the results as indicated.

As the first suit to be brought under the plant patent act, the case holds wide interest for all branches of commercial horticulture. The national act was obtained only after the expenditure of much money and effort in the belief that the originator of a new variety of plant should have due reward for his labors. It was apparent, however, there were many difficulties involved in the patenting of plants not present in obtaining protection for mechanical devices. The recent decision may be considered an initial step in clarification of points of the act.

Text of Decision.

The text of the decision as delivered by Judge Jones is as follows:

"The suit is one for infringement, injunction and accounting for damages and profits in respect of plant letters patent No. 110 issued to Horvath and assigned to the plaintiff. Invalidity and noninfringement are the main defenses to the bill. Defendant also asserts failure to prove corporate capacity of the plaintiff and failure to prove assignment, both of which are denied by answer, but the primary questions upon which the controversy turns are prior public use and infringement.

"*Berberis Thunbergii pluriflora erecta* is the botanical name of the patented plant made the subject of plant patent No. 110 granted to Horvath on October 23, 1934, on an application filed July 19, 1934. For the purpose of decision,

it will be assumed that such a patent is authorized by title 35, sections 31 and 40, United States Code as amended 1930. But if the facts reveal that the plant was introduced to the public prior to May 23, 1930, there is no occasion for further consideration of the validity of the patent; see title 35, section 32a. Nor is there necessity for such consideration unless the proof shows that the plant was not in use for more than two years prior to the application of July, 1934.

"Horvath, the inventor and assignor of the plaintiff, testified that he began developing the upright barberry in 1910, when he discovered that one of a great number of Japanese barberry plants had peculiar upright growing characteristics; that by a process of selection and genetics through five generations of seedling planting and growth, he finally asexually produced in the winter of 1923-24 a new barberry having novel features not known before, which could not be duplicated save from cuttings of his plants thus produced. The charge is that the defendants obtained their plants from cuttings of the plaintiff, because that constitutes asexual reproduction, and in no other way could the alleged infringing plants have been produced.

"From a consideration of all of the evidence upon the subject, I feel unable to say that it would be impossible to reproduce or duplicate substantially the character of plant of the plaintiff without cuttings from the Horvath plants. Conceding that the plants of the plaintiff and of the defendants have similar characteristics, the proof is not clear and convincing that the plaintiff must have appropriated plants or cuttings belonging to Horvath or his assignee.

"The use of nature and knowledge of propagation of plant life seem to me to have been the forces behind the development of the upright variety of barberry. I am not prepared to accord invention to the result produced by such uses in respect of the upright barberry, but if it were otherwise, the fact of the knowledge and existence of the plant prior to the amendment of May, 1930, and its prior public use, would fatally impair its validity.

"The transaction of August 12, 1931, whereby one Endress transferred to the plaintiff some eight thousand erect barberry plants which had been in his possession since 1929, gives much support to the defendants' claim of fatal public use—the date of the transaction being more than two years prior to the application of Horvath and prior to the approval of the amendment in respect of the plant patents.

"There is evidence that Horvath had fully developed his plant as early as 1924, and from the other evidence I am persuaded that the plant was introduced to the public prior to May 23, 1930.

"Nor can one ignore the disinterested evidence of Woolworth employees as to sales of upright barberry plants by them in the springs of 1932 and 1935.

"Upon due consideration of the issues, and in view of the existence and public use of characteristic upright barberry prior to the approval of the act of May

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23, 1930, and of the other considerations mentioned, judgment may be entered for the defendants, and bill dismissed.

"Findings and conclusions may be submitted for consideration and adoption."

ROSE PATENTED.

A plant patent was issued May 12 to F. E. Cremer, Hanover, Pa., according to Rummel, Rummel & Woodworth, patent lawyers of Chicago, as follows:

No. 177. Rose. Frank Eugene Cremer, Hanover, Pa. A new variety of rose plant characterized particularly by its vigorous growth and free-blooming habits, its profuse foliage and its full-petaled, substantially double flowers of distinctive salmon-orange color, changing as described in specification and having long-lasting, nonshattering qualities.

ELDER MOSBÆK RETIRES.

Ludvig Mosbæk, of the Ferndale Nursery, Askov, Minn., has announced that he has retired from business. The Ferndale Nursery is now owned by his son, Hans Mosbæk, who has dropped the "a" in the last name. Mrs. H. R. Buck, a daughter, who has been in charge of the floral end of the business for some time, is secretary of the firm.

The elder Mosbæk plans to devote himself to political work and he has already written several brief pamphlets on matters of public interest. This pioneer in the nursery business is well qualified, having always taken a keen interest in public affairs. L. S.

CATALOGUES RECEIVED.

Weller Nurseries Co., Holland, Mich.—A general price list of herbaceous perennials for rockeries, hardy borders and wall gardens and for use as cut flowers. The stock is field-grown.

The Homestead Nurseries, Boskoop, Holland.—With text in English and prices in American or Canadian currency, a clearly printed catalogue lists rhododendrons, including azaleas; begonia and gloriole bulbs, roses, conifers, deciduous stock, hardy perennials and alpine, also iris and peonies. The catalogue is indexed.

Herbst Bros., New York.—As agents for T. Sakata & Co., Japan, Herbst Bros. offer, in their price list, tree and shrub seeds, including those of some genera now ripening. Flower and vegetable seeds, fertilizers and horticultural books are also listed. Japanese-grown cyclamen seeds are specially mentioned.

T. Sakata & Co., Nishi-Hiranuma, Yokohama, Japan.—Price list of Japanese bulbs for forcing or bedding, including tulip, narcissus, anemone, crocus and freesia bulbs, also gladioli for autumn planting and small bulbous material. There are several half-tone illustrations.

Sunnybrook Farms Nursery, Chesterland, O.—Price list of perennials and rockery plants printed in black on an attractive green paper. Included in the list are herbs. A separate folder presents annuals, including bedding stock.

SCHOELL BROS., whose nursery at Nauvoo, Ill., was dismantled to make way for a new highway, are building anew farther east on the same land.

PAUL F. FRESE, recently advertising manager and director of promotion for Bobbink & Atkins, Rutherford, N. J., is now an associate editor of *Better Homes & Gardens*, published at Des Moines, Ia. Mr. Frese, graduate of Massachusetts State College, has written for a number of magazines and was once assistant to Robert Pyle, of the Conard-Pyle Co., West Grove, Pa.

AN OFFER has been made by Elmer Carr, proprietor of the Pine Hurst Nursery, Santa Cruz, Cal., in collaboration with Leonard Coates Nurseries, Inc., San Jose, to plant 300 Paul's Scarlet Climber rosebushes without charge along the completed portion of the Los Gatos-Santa Cruz highway. Mr. Carr proposes likewise to plant the rest of the highway when it is finished.

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CHICAGO HOME SHOW.

The craft was well represented at the home show staged May 18 to 24 at the Coliseum, Chicago. John Servas was a director. Facing the main entrance was a striking landscape setting by Beaudry & Associates, in which seasonable greenhouse plants were effectively used; in bloom were hydrangeas, yellow callas, begonias, ageratums and garden annuals in a lawn setting. The model home, featured in newspaper publicity for the exposition, was landscaped by F. D. Clavey's Ravinia Nurseries. A brisk sale of evergreens and rhododendrons was reported by Pfund-Bell Nurseries, which maintained a sales booth.

The rock garden was one of the largest ever seen in local indoor shows; this immense setting was constructed by the Tuinstra Landscape Co., 516 West Ninety-fifth street, Chicago, and was remarkable for the variety and selection of flowering shrubs, sedums and other rock garden materials. Trade exhibits near by were maintained by J. Oliver Johnson, Inc., Chicago; Atkins & Durbrow, Inc., New York, and Peat Import Corp., New York.

CHANGE CHICAGO IRIS SHOW.

Because the recent warm weather has brought irises out more rapidly than was anticipated, the dates of the second annual Chicago iris show sponsored by the Midwest Horticultural Society, with the cooperation of the American Iris Society, have been advanced to May 30 and 31 from June 6 and 7. The exhibition will be held in Horticultural hall at the Garfield park conservatory, Chicago. H. H. Everett, Lincoln, Neb., president of the national society, plans to attend this show, and there will be nine judges accredited by the A. I. S.

The silver medal of the national society will be awarded to the best seedling introduction, and the society's bronze medal is to be given to the best display by a commercial firm. There will be no charge for entering exhibits.

WEST SPRINGFIELD, MASS.

One of the loveliest and most extensive tulip displays in this section has been featured the past two weeks at the beautiful grounds of the J. W. Adams Nursery Co., Westfield road. A cordial invitation made through the newspapers for the public to attend this exhibition received a splendid response. Sunday, May 17, throngs of people viewed not only the tulip show, but the beautiful and unusual garden plantings. A young boy and girl clad in colorful Holland clothes and the inevitable wooden shoes passed among the visitors distributing order blanks which listed some sixty tulip varieties, the majority of which were in bloom on the grounds.

Mr. Adams commented on the wonderful business transacted since early spring, trade being far better than that of any year past. Orders have come in so heavily that some trouble has been met in making deliveries on schedule. Plans are already under way for more elaborate ground displays next year.

The Kelsey-Highlands Nursery, East Boxford, Mass., has appointed the Redmond Co., Boston, as its advertising agent and will use the radio and the newspapers as advertising mediums.

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NOVELTIES

ANNOUNCEMENT

Jackson & Perkins Patented Roses may now be secured from a group of selected growers throughout the nation. The following firms have been licensed to rewholesale J & P Patented Roses:

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 Brown Floral Co., Salt Lake City, Utah.
 Burr, C. H. & Co., Manchester, Conn.
 Cashman Nurs., Owatonna, Minn.
 Chase Nurs. Co., Chas., Alabama
 Cole Nurs. Co., Painesville, Ohio
 Corard-Pyle Co., West Grove, Pa.
 Dixie Rose Nurs., Tyler, Texas
 Dreer, Hy. A. Inc., Riverton, N. J.
 Germain Seed & Plant Co., Los Angeles, Cal.
 Howard Rose Co., Hemet, Cal.
 Klyn, Gerard K., Mentor, Ohio
 Mount Arber Nurs., Shenandoah, Iowa
 Ruchel-Wheeler Co., San Jose, Cal.
 Shenandoah Nurs., Shenandoah, Iowa
 Smith, W. & T. Co., Geneva, N. Y.
 Somerset Rose Nurs., New Brunswick, N. J.
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Hardy Ornamentals

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LESTER C. LOVETT

Milford

Delaware

Texas Plans for A. A. N.

Visitors Urged to Spend Vacation on Convention Trip by Miss Wilma Gunter, for Texas Association

Nurserymen throughout the United States should begin now to make their plans for attending the American Association of Nurserymen convention, which is scheduled to be held at Dallas, Tex., July 21 to 23, with headquarters at the Adolphus hotel.

Your trip to Texas will be a cherished lifetime remembrance. As is customary in this day and time, many people attend conventions and spend their vacations by automobile. There are several ports in south Texas convenient for making a trip by steamship and motoring upstate afterward. This is suggested as an ideal vacation trip for nurserymen and their families coming to the convention from the northern and eastern states. If you take a boat trip south, you would enjoy the water trip. Besides, after landing, you can conveniently motor throughout the entire state.

As may be contrary to some ideas of an undeveloped territory, you will be able to motor throughout Texas over smooth paved highways, making speed to equal that in any section.

Texas Centennial Exposition.

At the exposition in Dallas, visitors will have an opportunity to see Texas in the four divisions in which it is divided, south Texas where many prominent historical cities are located, east Texas with its great oil fields and rose fields, west Texas with its great ranches and frontier of western activities, and north Texas, in which are located large cities and industrial centers.

Scenic Routes.

A committee is at work at this time designating special routes over which nursery visitors can be shown the main points of interest—parks, city plantings, rose fields, estates and gardens throughout the many cities. Besides these, there are many large nurseries which will be designated on the routes. For instance, in south Texas all nursery visitors will wish to visit the huge Griffing Nurseries, at Beaumont, while in north Texas, you will wish to visit the nurseries of Baker Bros. Co., at Fort Worth; the Texas Nursery Co., at Sherman, and possibly others in the same region.

The tours are likewise being worked out so that the visitors from the north and east will have the pleasure of visiting some of our naturalistic parks in Dallas, Fort Worth, Tyler and possibly San Antonio, Waco, Houston and Beaumont. The wealth of native growth as preserved and maintained in these naturalistic parks is but one of the many glories of Texas' natural beauty.

A Hint for Real Comfort.

Don't think that this is a forewarning to Texas weather—to the contrary. Take this precaution, and you'll enjoy real comfort. As the convention dates represent summer time in Texas, leave your winter "red flannels" at home and bring along your summer linens. The gulf breezes are quite effective throughout the state and will keep you comfortable, even while not in the air-

conditioned hotels. The tours and motor trips are being arranged at the convention for early morning and late evening, so that the midday will be spent at the hotel.

Texas nurserymen join in extending a hearty welcome, "such as only can be extended with Texas hospitality," to every nurseryman throughout the United States. The convention offers much within itself—but Texas nurserymen wish to offer more, all of which will not be revealed until you are here. Please arrange now to spend your vacation in Texas. Bring the whole family and tour the state while here. It will be something really worth your time and attention. There are many nurserymen in Texas to wish you an enjoyable trip and assist in showing you over our mammoth state.

Miss Wilma Gunter, Chairman,
Publicity Committee,
Texas Association of Nurserymen.

PIONEER SOUTHWEST NURSERY.

This year marks the fiftieth anniversary of the organization now operating as the Griffing Nurseries at Beaumont, Tex. The business, one of the largest of its kind in the southwest, had its beginning in northern Florida, twenty-eight miles from Jacksonville, where W. C. Griffing and four brothers first specialized in the budding of peach seedlings with select varieties.

Achieving a reputation in the fruit field, the firm was frequently called on to cultivate and supervise large orchards throughout Florida, Alabama, Georgia and Texas. The extensive Texas developments began when W. C. Griffing, at the age of 19, was called to Hitchcock, Tex., by the promoter of a large pear orchard.

The early success of this venture led to the development of many similar plantings along the Gulf coast and in the Rio Grande valley, all of which took larger numbers of the trees grown by the Griffing Bros. Nursery in Florida. In 1907, a branch was established at Raymondville, where important citrus experiments were carried on. Another branch was maintained for many years at Grand Bay, Ala. As a result of an investment in the business by John W. Gates, father of the city of Port Arthur, Tex., a large branch was also opened in that city.

Eventually a division of the properties was made. The oldest of the Griffing brothers remained at the original location at MacClenny, Fla. Another took over the management of the branch at Jacksonville, Fla. A third took over the citrus nurseries and orchards in south Florida, while a fourth took charge of the development in the Rio Grande valley in Texas. W. C. Griffing assumed the ownership of the Port Arthur establishment, which he operated as the Griffing Nurseries.

In 1917-18, the Gulf coast suffered a severe drought, and heavy losses of stock resulted at the Port Arthur nursery, which was too large to be irrigated by pipes. Subsequently the business was moved to Rosedale, about three miles

from Beaumont, where there are now 360 acres planted to fruit and ornamental stock. This is a splendidly equipped establishment with excellent shipping facilities. Extensive educational campaigns to promote planting in the southwest have been carried on by the firm, these efforts including the utilization of a demonstration car, adapted from a railroad baggage car, which was sent to various towns accompanied by trained lecturers.

Associated with W. C. Griffing for the past five years is a son, Ralph C. Griffing, who completed his college training at the Texas A. & M. College in 1930 and has assumed responsibilities in all departments of the business under the guidance of his father.

This spring an office and display grounds were opened at Houston. The increased activity led to the recent transfer of Miss Wilma Gunter, to handle office routine and wholesale business there. She had been at Beaumont for ten years, active in sales, garden club and trade association work. Mancill Allen continues in charge of landscape sales and service at Houston.

WEAVER'S SUFFERS FROM FIRE.

Serious losses from fire were experienced last week by the E. F. Weaver Nurseries & Greenhouses, Wichita, Kan., according to M. D. Gray, manager of the firm. Total damages may mount to \$15,000 or \$20,000, it is estimated. The conflagration destroyed all the service buildings and the general offices, which included the packing and shipping quarters.

Because of the nature of the fire, it was impossible to save any of the books, files and other records of many years. Lost, too, were records of many current unfilled orders. Duplicates of unfilled orders placed with the firm are requested by the Weaver concern, so that they can be executed as promptly as possible. Fortunately, the fire caused only minor damage to growing stock, which includes numerous items in demand by the trade. Temporary quarters to carry on business were established Monday, May 25. Permanent rebuilding will take place after the spring shipping season, it is said.



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SCARFF'S NURSERIES
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TREE PEONIES

and all other types

New Hybrid Lilacs - Fine Evergreens
Ask for List

The Cottage Gardens
Lansing, Michigan

20,000 CHERRY, Montmorency and Early Richmond, 2-year, XX and 1 1/2 inch.
 5,000 SPIRÆA, Vanhouttei, 3 to 4 feet and 4 to 5 feet.
 25,000 ELMS, American, Vase and Mo-line, transplanted, up to 4 inches.
 10,000 MAPLE, Norway, transplanted, up to 2 1/2 inches.
 1,000 ARBOR-VITÆ, Pyramidalis, up to 8 feet.
 400 PINE, Mugho, from 2 to 4 feet.
 1,000 SPRUCE, Norway, sheared, none better, 3 to 5 feet.
 500 JUNIFER, Frizer's, 5 to 8 feet spread, beauties.
 2,000 ARBOR-VITÆ, American, and RETINOSPORA, 4 to 7 feet.
 Send for list on many other items.

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HOGANSVILLE NURSERIES

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NORTH JERSEY MEETING.

A meeting of the North Jersey Metropolitan Association of Nurseriesmen was held May 13 at the Passaic county courthouse, Paterson, N. J. The president made a report on the final arrangements for the short course for nurserymen to be held in the Paterson courthouse at 7 p. m. on Friday evenings between October 15 and December 15. The subjects to be covered are soils, fertilizers, cover crops, insect pests, sprays and spraying, diseases, propagation, new varieties and nursery practices regarding winterkilling, root pruning, etc. This course will be conducted as a school, with a daily quiz and a final review. Those who attend regularly and pass the tests will be given a certificate.

The members instructed the secretary to write Prof. F. G. Helyard and thank him for the interest he has shown in the association. Considerable discussion was heard on holding a family picnic and clambake the latter part of June or first part of July. It was finally decided that the entertainment committee should select the place and make arrangements for the outing. There will be a small charge for adults, the rest of the expense being paid from the treasury.

The library committee was instructed to buy some new books. A letter to Dr. R. P. White was ordered sent in reference to starting the summer tours by having the first meeting in New Brunswick, after which meetings at different nurseries will be resumed.

The association again decided to support the Herald Tribune yard and garden contest. All members were notified to prepare their bulb orders for next fall, so that a committee can combine them as one order.

William Halliey, Sec'y.

NURSEYRIMEN AT SALEM, ORE.

The Oregon Association of Nurseriesmen met at the state fairgrounds in Salem, Ore., in all-day session May 20, according to Paul Doty, of Doty & Doerner, Inc., Portland, president. Solon T. White, state director of agriculture, aided in welcoming the visitors. Knight Pearcey, Salem, was in charge of arrangements, including those for a special luncheon served on the grounds. On the program were Mr. Doty, S. B. Hall, county agricultural agent, Gresham; Frank McKennon, chief of the division of plant industry; Henry Hartman, horticulturist of the Oregon agricultural experiment station, Corvallis, and J. S. Wieman, superintendent of nursery service of the state department of agriculture. As a result of a decision at the midwinter meeting of the association, the session was open to around 1,000 licensed nurserymen.

DONALD WYMAN, of Bay State Nurseries, Inc., North Abington, Mass., talked on flowers and trees before a meeting of the Rotary Club of Brockton May 7.

TRIBUTE to the memory of the late Charles W. Morey, owner of the Woonsocket Hill Nurseries, Woonsocket, R. I., was paid by the students of the high school at the school's annual Arbor day exercises May 8 by planting a tree, donated by his widow, as a lasting reminder of his annual ivy and shrubbery contributions to the school.

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Jap Beetle Hearing

Spot Quarantine Imposed on Several Small Areas in Chicago after Hearing in That City on May 15

A spot quarantine in certain areas of the city of Chicago because of the Japanese beetle becomes effective on June 1, according to an announcement by L. A. Moore, Springfield, Ill., superintendent of the division of plant industry of the Illinois department of agriculture, at a hearing held at Chicago, May 15. There were no serious objections raised at the hearing; the Illinois State Nurserymen's Association presented a resolution from its board of directors favoring this type of quarantine.

There were about twenty in attendance at the hearing, which was presided over by Mr. Moore and by H. F. Seifert, Urbana, Ill., chief plant inspector of the Illinois department of agriculture. Representatives of the Illinois State Nurserymen's Association, the Commercial Flower Growers of Chicago, the Illinois State Florists' Association, the Allied Florists' Association of Illinois and the Chicago park district were heard.

Need for Quarantine.

Explaining the quarantine, which will be imposed by the state and will be under the jurisdiction of the division of plant industry of the state department of agriculture, Mr. Moore stated it is a compromise measure agreed to by the state department of agriculture and the bureau of entomology and plant quarantine of the United States Department of Agriculture, which first recommended the quarantining of the entire state or at least the whole of Cook county because of large numbers of beetles trapped. The spot quarantine affects five small areas within the city of Chicago.

Mr. Seifert read the announcement of the proposed quarantine as issued by Walter W. McLaughlin, director of the state department of agriculture, and explained various features of the ban. He also described work being done to control the pest. Mr. Seifert also stated that about 7,500 Japanese beetle traps will be set out in other parts of Chicago this summer for the purpose of checking up on infestation in other areas.

Trade Interests.

Miles Bryant, Princeton, Ill., president of the American Association of Nurserymen and secretary of the Illinois State Nurserymen's Association, spoke in favor of the quarantine and presented the resolution from the state organization. Otto H. Amling, Maywood, Ill., spoke in favor of it to keep the pest from spreading. Laurent E. Clody, secretary of the Commercial Flower Growers of Chicago, raised objections to the imposition of the quarantine and stated that the officers of his organization are of the opinion that this spot quarantine is only the opening wedge into what will eventually be a complete quarantine in Cook county.

August Koch, chief horticulturist of the Chicago park district, spoke on the effect of the ban on the activities of park florists, but agreed that the spot quarantine is probably necessary to hinder the spread of the pest. He asked

for sufficient time to get necessary appropriations and make other arrangements before the quarantine areas are enlarged.

Among those present were Alec Henderson, Chicago; Otto H. Amling, Maywood, and Laurent E. Clody, Chicago, representing florists' interests; Miles Bryant, Princeton; A. H. Hill, Dundee; Arthur Schroeder, Des Plaines, and Hubert S. Nelson, Glenview, representing nurserymen's interests; August Koch, George J. Ehmann, Herman Bentley and Frank K. Balthis, Chicago, representing park interests; C. C. Compton, entomologist of the Illinois Natural History Survey, Urbana; G. L. Pierce, Villa Park, nursery inspector.

Effective June 1, the movement in any manner of nursery, ornamental or greenhouse stock, or other plants, plant roots or sand, soil, earth, peat, compost or manure from any of the quarantined areas in the city of Chicago to any other part of the state under circumstances other than those prescribed in the rules and regulations of the quarantine is prohibited. Horticultural establishments within the areas will have to be inspected by a representative of the Illinois state department of agriculture in order to secure a permit to move plants outside the area.

CHICAGO JAP BEETLE SITUATION.

Japanese beetles were first captured in Chicago during the summer of 1934, according to Avery S. Hoyt, Washington, D. C., acting chief of the bureau of entomology and plant quarantine of the United States Department of Agriculture, who provided this report on the Japanese beetle situation in Chicago prepared by L. H. Worthley, of the same bureau, who is in charge of Japanese beetle control work.

With a total of 1,038 Japanese beetle traps operated in Chicago during 1934, inspectors of the bureau of entomology and plant quarantine succeeded in catching six specimens of this destructive insect. Guided by the previous season's results, the federal bureau during the summer of 1935 concentrated 3,065 traps in the sections in and surrounding the previously discovered infestations and captured a total of thirty-nine beetles. Of this total, twenty-three beetles were collected in the immediate vicinity of the Chicago produce terminal, and nine additional beetles were caught in near-by sections. Most of the dwellings and buildings in the affected district have small yards with little or no foliage that would be attractive to the beetle. Along one boundary of the infested sections, however, there are well kept lawns that may readily serve as breeding grounds for the pest. Near the produce terminal there are large fields covered during the summer with high weeds favorable for beetle feeding. Of the remaining beetles caught, two were trapped in a residential district six miles from the produce terminal and three in another residential section seven miles from the main area.

AMERICAN NURSERYMAN

There are two usual procedures that may be employed to combat an incipient infestation of this scope. The infested areas, comprising over fifty acres, may be made toxic to the beetle grub population in the soil by the application of arsenate of lead at the rate of 1,000 pounds of the soil insecticide per acre, or the sections involved may be placed under quarantine to prevent spread of the insect and intensively trapped in successive years to suppress and retard the insect's migration.

Although over 3,000 traps were distributed in Chicago during the summer of 1935, this number was entirely inadequate to determine the extent to which the insect had spread over the city. Accordingly, were lead arsenate to be applied to the known infested area, and future years' trapping disclosed outlying infestations beyond those already determined, the soil poisoning in the limited sections of the city thus far trapped would prove ineffective.

Since the extent of the infestation in the city has not fully been determined, the issuance of an intrastate quarantine which would prohibit the movement of likely carriers of the insect from the known infested sections, with provisions for more extensive trapping in the area, is deemed the most feasible means of meeting the present situation.

Continued trapping should reveal the true extent of Japanese beetle infestation in Chicago and furnish a more accurate basis for future treatments or quarantine action.

Accordingly, the Illinois state department of agriculture held a public hearing to consider the advisability of placing such an intrastate quarantine to require inspection and certification of nursery, ornamental and greenhouse stock or other plants, plant roots or sand, soil, earth, peat, compost or manure moving from the proposed regulated areas to or through any other part of the city of Chicago or the state of Illinois.

Quarantine action with respect to the Chicago infestation was withheld by the federal plant quarantine authorities in a revision of the federal regulations effective March 16, 1936, upon the assurance of Illinois state officials that adequate measures would be taken to safeguard uninfested states from spread of the Japanese beetle from Chicago. The Illinois state quarantine is the method adopted to fulfill this assurance.

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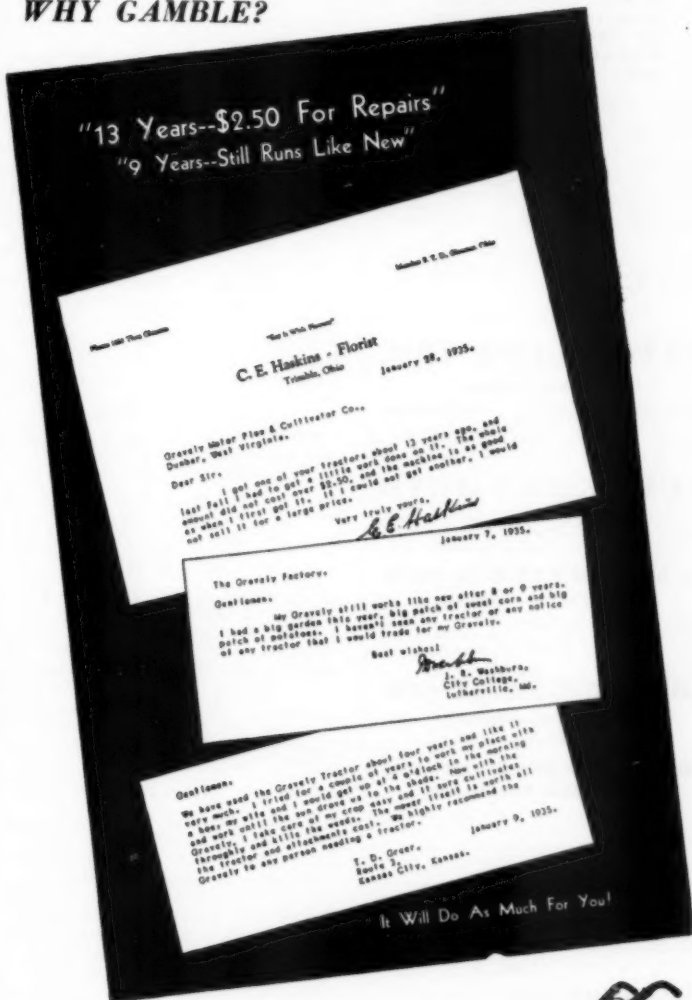
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HARTFORD ROSE WEEK.

This year's rose festival in Elizabeth park, the municipal rose garden at Hartford, Conn., promises to be as fine as any in the past. Rose week will be held from June 21 to 28, and the lateness of the season indicates that even up to July 4 there will be a fine show.

This collection of roses, which was started in 1898, has attained a national reputation. Surrounded by trees, the garden takes on a dignity because of effective seclusion from evidence of city life. More than 500 varieties of roses are included in the collection, 100 of which are of recent introduction and represented by two to five plants. As new varieties prove their worth, a place is made for them. This year Crimson Glory and Mme. Cochet-Cochet are given a full bed display. Pink, white and red ramblers on high, broad arches, and a vine-covered rustic arbor add greatly to the depth of the mass of color, making a spectacle long to be remembered.

Nowhere else in America is there to be seen so large a garden planting of hybrid perpetuals. There are also many large beds devoted to hybrid teas. No rose that has occupied a full-size bed is discarded until it has been surpassed in beauty and sturdiness. The American Rose Society will make final judgment on many of the roses and give national and regional medal awards to high-rating varieties.

OBITUARY.

John F. Myers.

At the age of 59 years, John Franklin Myers, nurseryman of Fresno, Cal., for forty years, died May 7 at his home. He had been ill a month. Mr. Myers was born in 1877 in York county, Pa., and went to Fresno when he was 18 years old. He was active in religious work in the San Joaquin valley. His widow, two sons, two sisters and a brother survive him.

Arthur Everett.

Aged 70 years, Arthur A. Everett, nurseryman of Bellingham, Wash., was found dead in the flower garden beside his home by neighbors May 18. Mr. Everett had suffered with a weak heart for some time and was believed to have been stricken with an attack and to have fallen into the flower patch as he neared the house on his return from church the night before. He had lived in Bellingham for sixteen years.

WILLIAM A. ALLEN, aged 77 years, for forty years operator of the 400-acre Allen Nursery, Saybrook, O., died May 6 at his home near there.

ALFRED J. HUMPHREYS, who established the Humphreys Landscape Co. at Mount Sterling, Ky., died Friday, May 15, at the age of 91. Burial in Machpelah cemetery followed services at the late residence May 17. A. G. Humphreys, a son, has operated the business for some time.

HELP WANTED

Nursery foreman. Married. Experienced in the production of ornamental stock. State age, nationality and wages expected. Good opportunity in large Ohio nursery. Address No. 34, c/o American Nurseryman, 508 S. Dearborn St., Chicago.

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Greater significance than ever before is held by this annual meeting—the trade's most important gathering of the year. Expanding sales and increased production will demand complete understanding and co-operation of members on marketing problems. Legislation, quarantines, taxation and other vital trade problems will be discussed. Ideas on growing and operating methods will be exchanged by nurserymen from all sections of the country. Talks by the leaders of the industry will receive utmost attention. Coupled with the interest in the Texas Centennial Exposition, a large attendance is expected.

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AMERICAN NURSERYMAN

JUNE 15 — JULY 1 — JULY 15

Advance information on scheduled events, subjects up for discussion, entertainment features and the complete convention program will appear in the pre-convention issues of the *American Nurseryman*.

Every Grower should take this opportunity of inviting contact with prospective purchasers of nursery stock for fall and spring, by keeping his name before the industry in these numbers. Remember that big spring plantings mean an increased supply for the coming season. Start your selling program early in the columns of the *American Nurseryman*.

Manufacturers of Equipment and Supplies will find it to their advantage to direct attention to their products in these issues at a time when the nursery operators are interested in matters pertaining to growing and shipping stock.

If you are exhibiting at Dallas, this advertising serves as an advance invitation to visit your booth and adds value to your display. Those not exhibiting will find, in the advertising columns of the *American Nurseryman*, a means of placing their merchandise before the buyers.

Ready money from spring sales will stimulate buying. The greater attention centered in the pre-convention issues spells increased value for your advertising dollar. Plan your convention publicity program in the *American Nurseryman* now!

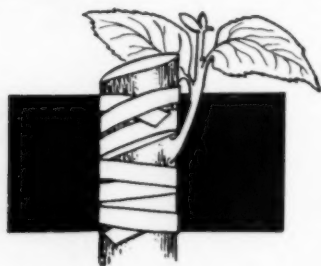
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